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## PATENT ABSTRACTS OF JAPAN

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(21)Application number: **07116430**(22)Date of filing: **18.04.95**(71)Applicant: **KOSHIN KOGAKU:KK**

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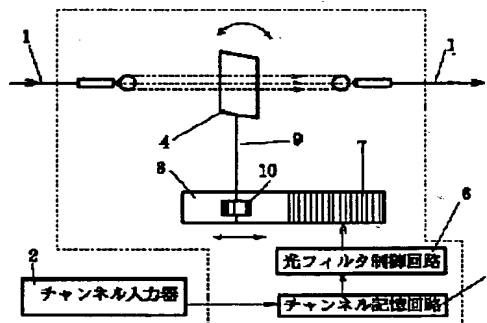
**(54)OPTICAL TUNABLE FILTER****(57)Abstract**

**PURPOSE:** To simply select a prescribed transmitted wavelength by arranging a BPF in a collimated optical path in a freely oscillating way, and providing an optical filter control circuit controlling a tilt angle of the BPF, a channel input device and a channel storage circuit.

**CONSTITUTION:** A steep transmitted spectrum is obtained from a BPF 4 even when its optical axis is tilted with respect to an optical axis of a collimated optical path, a linear way 8 is fitted to a tip of a piezoelectric actuator 7 formed by laminating piezo elements, and a tip roll 10 of a shaft 9 of the BPF 4 is pressed into contact with the linear way 8. The tilt angle of the BPF 4 is adjusted in response to the elongation/contraction amount of the actuator 7, an applied voltage to the actuator 7 is adjusted by an optical filter control circuit 6 to control the tilt angle of the BPF 4. When a transmitted wavelength is received from a channel storage circuit 3, the BPF 4 transmits only the transmitted wavelength. Furthermore, plural transmitted wavelengths are stored in the circuit

3 in advance and each channel number is assigned to each transmitted wavelength.

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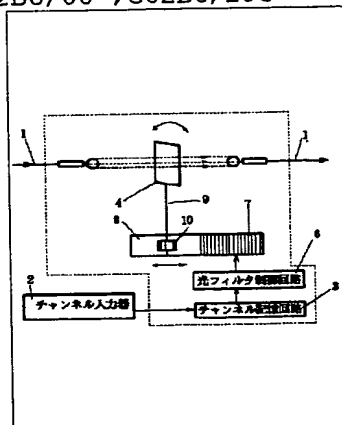


## ===== WPI =====

- TI - Optical tunable filter for multiplexed communication - has memory to store predetermined wavelength based on channel number input from input device
- AB - J08288931 The appts consists of a bandpass filter (4) which swingably arranged along an optical path. The adjustment of inclination angle of the filter is performed by a piezoelectric actuator (7).
- The actuator is controlled by an optical filter controller (6). A channel input device (2) inputs a channel number by a keyboard, based on which a predetermined wavelength is stored in a channel memory (3).
- ADVANTAGE - Makes it possible to pass predetermined wavelength of particular channel through filter by correct inclination angle. Enables simple and quick switching of transmission wavelength based on channel number.
- (Dwg.1/3)
- PN - JP8288931 A 19961101 DW199703 H04J14/00 003pp
- PR - JP19950116430 19950418
- PA - (KOSH-N) KOSHIN KOGAKU KK
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- DC - P81 V07 W02
- IC - G02B6/00 ;G02B6/293 ;H04J14/00 ;H04J14/02
- AN - 1997-027608 [03]

## ===== PAJ =====

- TI - OPTICAL TUNABLE FILTER
- AB - PURPOSE: To simply select a prescribed transmitted wavelength by arranging a BPF in a collimated optical path in a freely oscillating way, and providing an optical filter control circuit controlling a tilt angle of the BPF, a channel input device and a channel storage circuit.
- CONSTITUTION: A steep transmitted spectrum is obtained from a BPF 4 even when its optical axis is tilted with respect to an optical axis of a collimated optical path, a linear way 8 is fitted to a tip of a piezoelectric actuator 7 formed by laminating piezo elements, and a tip roll 10 of a shaft 9 of the BPF 4 is pressed into contact with the linear way 8. The tilt angle of the BPF 4 is adjusted in response to the elongation/contraction amount of the actuator 7, an applied voltage to the actuator 7 is adjusted by an optical filter control circuit 6 to control the tilt angle of the BPF 4. When a transmitted wavelength is received from a channel storage circuit 3, the BPF 4 transmits only the transmitted wavelength. Furthermore, plural transmitted wavelengths are stored in the circuit 3 in advance and each channel number is assigned to each transmitted wavelength.
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- IN - ENDO TAKASHI;MORIMURA HIROYUKI
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